

**GUIDED PRACTICE** for Examples 6 and 7

7. **WHAT IF?** In Example 6, what is the probability that you and your friends choose different costumes if the store sells 20 different costumes?
8. **BASKETBALL** A high school basketball team leads at halftime in 60% of the games in a season. The team wins 80% of the time when they have the halftime lead, but only 10% of the time when they do not. What is the probability that the team wins a particular game during the season?

# 10.5 EXERCISES

**HOMEWORK KEY**= **WORKED-OUT SOLUTIONS** on p. WS1 for Exs. 13, 25, and 39= **TAKS PRACTICE AND REASONING** Exs. 15, 32, 34, 41, 43, and 44**SKILL PRACTICE**

1. **VOCABULARY** Copy and complete: The probability that  $B$  will occur given that  $A$  has occurred is called the ? of  $B$  given  $A$ .
2. **WRITING** Explain the difference between dependent events and independent events, and give an example of each.

**INDEPENDENT EVENTS** Events  $A$  and  $B$  are independent. Find the indicated probability.

- |  |  |   |
|--|--|---|
| 3. $P(A) = 0.4$<br>$P(B) = 0.6$<br>$P(A \text{ and } B) = \underline{\quad ? \quad}$ | 4. $P(A) = 0.3$<br>$P(B) = 0.4$<br>$P(A \text{ and } B) = \underline{\quad ? \quad}$ | 5. $P(A) = 0.25$<br>$P(B) = \underline{\quad ? \quad}$<br>$P(A \text{ and } B) = 0.2$ |
| 6. $P(A) = 0.5$<br>$P(B) = \underline{\quad ? \quad}$<br>$P(A \text{ and } B) = 0.1$ | 7. $P(A) = \underline{\quad ? \quad}$<br>$P(B) = 0.8$<br>$P(A \text{ and } B) = 0.6$ | 8. $P(A) = \underline{\quad ? \quad}$<br>$P(B) = 0.9$<br>$P(A \text{ and } B) = 0.45$ |

**SPINNING A WHEEL** You are playing a game that involves spinning the wheel shown. Find the probability of spinning the given colors.

9. green, then blue                      10. red, then yellow
11. blue, then red                        12. yellow, then green
13. blue, then green, then red        14. green, then red, then yellow



15. **TAKS REASONING** Events  $A$  and  $B$  are independent. What is  $P(A \text{ and } B)$  if  $P(A) = 0.3$  and  $P(B) = 0.2$ ?
- (A) 0.06                      (B) 0.1                      (C) 0.5                      (D) 0.6

**DEPENDENT EVENTS** Events  $A$  and  $B$  are dependent. Find the indicated probability.

- |  |   |  |
|--|---|--|
| 16. $P(A) = 0.3$<br>$P(B A) = 0.6$<br>$P(A \text{ and } B) = \underline{\quad ? \quad}$  | 17. $P(A) = 0.7$<br>$P(B A) = 0.5$<br>$P(A \text{ and } B) = \underline{\quad ? \quad}$ | 18. $P(A) = 0.8$<br>$P(B A) = \underline{\quad ? \quad}$<br>$P(A \text{ and } B) = 0.32$ |
| 19. $P(A) = 0.6$<br>$P(B A) = \underline{\quad ? \quad}$<br>$P(A \text{ and } B) = 0.45$ | 20. $P(A) = \underline{\quad ? \quad}$<br>$P(B A) = 0.4$<br>$P(A \text{ and } B) = 0.2$ | 21. $P(A) = 0.7$<br>$P(B A) = \underline{\quad ? \quad}$<br>$P(A \text{ and } B) = 0.63$ |

**EXAMPLES 1 and 2**

on pp. 717–718 for Exs. 3–15

**EXAMPLE 4**

on p. 719 for Exs. 16–25